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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,880	01/14/2004	Michael R. Dennis	J-OAER.1021	5193
56703	7590	02/23/2006	EXAMINER HOLZEN, STEPHEN A	
ROBERT D. VARITZ, P.C. 4915 SE 33RD PLACE PORTLAND, OR 97202			ART UNIT 3644	PAPER NUMBER

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/757,880

Applicant(s)

DENNIS, MICHAEL R.

Examiner

Stephen A. Holzen

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wikipedia.org (Auxiliary Power Units) in view of Dionne ('929) in view of Percy ('143) and further in view of Maeda ('519).

Prior to filing this application it was well known in the art that Auxiliary Power Units are relatively small self-contained power sources used in aircraft to start the main engines, usually with compressed air, and to provide electrical power while the aircraft is on the ground. In many aircraft, the APU can also provide electrical power while in the air (see [www.wikipedia.org](http://www.wikipedia.org), "Auxiliary Power Unit", May 5, 2003).

The examiner asserts that inherently an APU has brushes for generating / transmitting electricity. (The air enters the combustion chamber, where it is mixed with fuel; this mixture is ignited to produce very temperatures ~1,650°F~ at the combustion chamber exit. This high-temperature, high-pressure air is expanded through the turbine wheel, which extracts the energy in the air and converts it to shaft power. The shaft power directly drives the generator and compressor, which are mounted on the same shaft as the turbine wheel. The generator absorbs a relative percent ~say 30%~ of the turbine power, while the compressor absorbs the rest.) There must be a sliding contact zone that transfers the generated electricity to its useable location (i.e. batteries or aircraft lighting).

Furthermore, at the time of filing, it was well known in the art to provide air intakes separate and independent from turbojet engines. "They are usually mounted at the rear of modern jet airlines. The APU exhaust can be seen on most modern airliners as a small pipe exiting at the aircraft tail".

([www.wikipedia.org](http://www.wikipedia.org), Auxiliary Power Unit" 5/24/2003.)

As further evidence that it was known to keep the APU and the engines spaced apart and using separate inlets see US 6,651,929 to Dionne; which shows an APU located at the tail of an aircraft completely independent from the operational and main thrusting engines.

Furthermore it was well known in the art to space an air intake apart from a APU since the APU is typically within the fuselage while the scoop is located on the exterior portion of the fuselage (see Dionne, Figure 1).

It would have been obvious to locate the scoop on the exterior of the fuselage, since it would increase the ability to scoop air.

Further, the examiner asserts that it was, at the time the invention was made, known to use a conduit structure to connect an inlet and outlet end. (see for example Percy: 4,704,143.) This reference teaches that it is well known in the art to design a fluid conduit structure having an expansion and compression chamber with a filter structure there between.

It would have been obvious to one having ordinary skill in the art to employ the device of Percy for the purpose of maximizing the filter's efficiency.

Maeda discloses that it is known to choose a filter that communicates with a trap chamber defined in a trap structure, so that water and oil vapor are coalesced into droplets, which are then captured in the trap chamber while any remaining liquid particles in the air are vaporized during passage through the filter.

It would have been obvious to one having ordinary skill in the art to employ the water trap and drain of Maeda to increase the live of the APU.

It should be appreciated that the applicant's functional language in the claim does not serve to impart patentability. While features of an apparatus may be recited either structurally or functional, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.

Apparatus claims cover what a device is, not what a device does. A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior apparatus teaches all the structural limitation of the claims. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d, 1429, 1431-.2 (Fed. Cir. 1997); Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990); Ex parte Masham, 2 USPQ 2d 1647 (Bd. Pat. App. & Inter. 1987).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 571-272-6903. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Teri Pham Luu', with a stylized flourish at the end.

**TERI PHAM LUU  
SUPERVISORY  
PRIMARY EXAMINER**